



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,260	09/30/2003	Koichiro Mitsui	4635-003	2073
23429 7590 03/19/2009 LOWE HAUPTMAN HAM & BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314				
EXAMINER				
HAND, MELANIE JO				
ART UNIT		PAPER NUMBER		
3761				
MAIL DATE		DELIVERY MODE		
03/19/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/673,260

Applicant(s)

MITSUI ET AL.

Examiner

MELANIE J. HAND

Art Unit

3761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4, 5, 8, 21, 23-25 and 32-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5, 8, 21, 23-25, 32-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed December 5, 2008 have been fully considered but they are not persuasive. However, examiner will briefly address the essence of applicant's arguments herein. It is noted that this action is non-final because a rejection of claims 21 and 23-25 under 35 U.S.C. 112, first paragraph is made in this action that is not prompted by the amendment to those claims.
2. With respect to arguments regarding claims 1 and 21: Applicant argues that the region 20 disclosed by Jingu is not configured to contact the hooks 22 in the folded state and thus does not meet the limitation of a non-engaging portion. The Office action makes no reference to region 20 of Jingu as the non-engaging portion, rather the action states that the engaging region of Jingu is defined collectively by the engaging portion 23 that engages the hooks and the area surrounding the engaging portion 23 that does not have loops and therefore serves as a portion whereby the hooks are directly contactable but not engagable. The region 20 applicant refers to comprises recessed parts 20 and is larger than the non-engaging portion cited against the claims because the non-engaging portion must be directly contactable with the hooks, and the outer portions of the region having the recessed parts 20 are not directly contactable by the hooks because of their location. As to applicant's argument regarding the limitation of a fixing tape folded along the outermost lateral edge of the respective side flap, this was a feature of now cancelled claim 9 and the rejection of claim 9 clearly acknowledges that Fries does not explicitly teach this limitation but certainly fairly suggests such a folded fixing tape because the tape is fully capable of being folded in the claimed manner and folding the tape in this manner prevents the engaging surface from prematurely attaching to portions of the diaper other than

those intended, therefore there exists motivation to fold the fixing tapes as recited in amended claims 1 and 22.

3. As to applicant's arguments regarding the Tanzer reference, different arguments have been presented with respect to Tanzer as part of different combinations of references. Thus it is unclear which arguments applicant is referring to and examiner maintains the position that the combination of Fries, Jingu and Tanzer meets all of the limitations of amended claims 1 and 21 incorporating the limitations of now cancelled claim 31. This response also applies to applicant's argument regarding new independent claim 32, as claim 32 recites the limitation previously recited in claim 31.
4. Applicant's arguments with regard to the dependent claims have been fully considered but are not persuasive, as applicant's arguments depend entirely on arguments regarding the rejection of claims 1, 21 and 32, which have been addressed *supra*.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 4, 5, 8, 21 and 23-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the disclosure as originally filed for an area of the non-engaging portion that faces and is directly engagable with the hook member

of the fixing tape being folded along the outermost lateral edge of the respective side flap is larger than that of the engaging portion. Applicant's specification makes no mention of relative size of these two features and the drawings do support the limitation that an area of non-engaging portion 7a is larger than that of engaging portion 7b.

7. Claims 35-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As to claim 35, there is no support in the disclosure as originally filed for a third portion that is separate from first second and attaching portions. Claims 36-40 directly or ultimately depend from claim 35 and are thus also rejected as reciting new matter.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 4, 5, 8, 21, 23-25 and 32-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fries et al (CA 2143791 A) in view of Jingu et al (JP 2002-000648) (English translation) and further in view of Tanzer et al (U.S. Patent No. 6,730,069).

With respect to **claim 1**: Fries discloses a disposable diaper 10 comprising a diaper main body including a top sheet 28, a back sheet 30 and an absorbent body 32 disposed between said top

sheet 28 and back sheet 30. (Page 4, lines 9-19) The diaper comprises a pair of side flaps 56,58 respectively extending outwardly from respective side edge portions in a lateral direction of said diaper main body. The side flaps are connected by bridge member 40 which is disposed between the top sheet and back sheet and thus the panels 56,58 are also disposed between said top sheet and back sheet. (Page 4, lines 19-27) Each of said side flaps 56,58 comprises an elastic sheet sandwiched between upper and lower non-woven fabric layers. (Page 32, lines 1-7) A pair of fixing tapes in the form of fastener tabs 36 each having a hook member are attached to one of said side flaps 56,58 (Fig. 1) in a vicinity of an outermost lateral edge of said side flap. (Page 32, lines 18-21) The fixing tape 36 disclosed by Fries comprises (i) a fixing tape substrate defining the body of fastener 36, (ii) said hook member provided on a surface of said fixing tape substrate (Fig. 1), and (iii) a gripping portion at one of opposite ends of the fixing tape substrate and adjacent to the hook member (Fig. 1) in the form of a small tape that tapers at the distal end of the fastener with respect to the diaper body. The fixing tape 36 disclosed by Fries is directly attached to the surface of said side flap 56 or 58. Fries does not disclose that the fixing tape is folded along the outermost lateral edge of the respective side flap 56,58, though it is fully capable of being folded in this manner so that said hook member faces the inner surface of the side flap. One of ordinary skill in the art would be motivated to fold the fixing tape in this manner to keep it out of the way prior to use so that it does not prematurely engage an area of the diaper other than that intended, potentially causing tearing of the fixing tape in order to disengage it for proper use.

Fries does not disclose a surface of the flap having an engaging portion. Jingu discloses such an engaging portion. It would be obvious to one of ordinary skill in the art to fold the fixing tape of Fries such that it engages said surface of the article of Fries as modified by Jingu to temporarily protect the hook fastener from contamination which would reduce its engaging force

with the engaging portion. Thus the fixing tape would be folded such that the hook member faces said surface of said side flap and is temporarily fixed to said surface of said side flap at the engaging portion, i.e. in the recited manner.

Fries does not disclose an engaging region on a surface of each side flap where the respective fixing tape is releasably engageable with said side flap through the hook member. Jingu teaches an absorbent article having side flaps and fixing tapes having hook members wherein an engaging region is present on a surface of each side flap where the respective fixing tape is releasably engageable with said side flap through the hook member. The engaging region is defined by a non-woven fabric that has no adhesive on said surface. The engaging region disclosed by Jingu comprises (a) an engaging portion in the form of loop fabric that is directly, mechanically and non-adhesively engageable with said hook member, and (b) a non-engaging portion defined by the surface of the side flap with which said hook member cannot be engaged at all. The non-engaging portion comprises a nonwoven fabric which is non-complimentary to the mechanically fastening hook member (i.e. it is not a loop and does not have loops thereon) and therefore necessarily has a lower engaging force with said hook member than the engaging portion. The non-engaging portion has an area that faces the hook member that is larger than the area of the engaging portion that faces the hook member. (Abstract, Figs. 3, 6 or 7) As can be seen in Fig. 3, and relying upon Fig. 3 solely for its depiction of relative dimensions of the engaging regions 23 and the rest of wings 12 (i.e. the non-engaging portion shown as the more densely dotted area).

Jingu does not explicitly disclose that an entire area of said engaging portion 23 is within in a range of 5% to 50% of the entire area of said hook member. However, it would be obvious to one of ordinary skill in the art to further modify the article of Fries as modified by Jingu such that the entire area of said engaging portion is in the range of 5-50% of the entire area of said

hook member with a reasonable expectation of success to ensure that the hook member sufficiently engages the engaging region. There is a design need or a market pressure to solve a problem (in this case provide a secure tape fastener that can engage the same respective part of a diaper it extends from), and there are a finite number of identified, predictable solutions (in this case the relative proportions of the hook area and engaging portion disclosed by Jingu), a person of ordinary skill in art has good reason to pursue known options within his or her technical grasp, and if this leads to anticipated success, it is likely product of ordinary skill and common sense, not innovation. The fixing tape substrate disclosed by Fries comprises a nonwoven fabric, inasmuch as it is a tape fastener, having a lower engaging force with said hook member than the engaging portion disclosed by Jingu inasmuch as the engaging portion comprises loop fabric which is the complimentary fastener material to hook material and thus engages fully, as opposed to the fixing tape substrate which has no means for engaging the hook member at all. The engaging region disclosed by Jingu defines a temporary fixing portion at which said fixing tape is temporarily fixed to said surface of the side flap via said engaging portions in a manner that most of the direct engagement between the engaging portion and the hook member is achieved by a portion of the hook member that is immediately adjacent the gripping portion inasmuch as most of the area of the hook portion is adjacent the gripping portion.

Fries does not disclose that said fixing tape is provided with an opening in said attaching portion. Tanzer teaches a fastener comprising a first flexible layer 72 comprised of a stretchable laminate of nonwoven material and a second flexible layer 78 attached to the first flexible layer. The first flexible layer contains islands of fastener material and the second flexible layer contains openings 80 corresponding to the location and size of each island located in an area of said fastener that is considered herein to be an attaching region. Tanzer teaches that the

openings allow for exposure of the fastener island 64, therefore it would be obvious to one of ordinary skill in the art to modify the tab fastener of the combined teaching of Fries and Jingu so as to contain openings in an attaching region as taught by Tanzer. ('069, Col. 9, line 67, Col. 10, lines 1,2, Col. 12, lines 57-65). The combined teaching of Fries and Jingu and Tanzer thus renders the limitation "a portion of said surface of said side flap being exposed through said opening and engageable with said hook member when said fixing tape is folded back" obvious.

With respect to **claim 4**: Neither Fries nor Jingu discloses an engaging force of said engaging region with said hook member. However, since the article of Fries as modified by Jingu has a hook member and an engaging portion that is the same material as that disclosed by applicant (i.e. loop material), it would be obvious to modify the article of Fries as modified by Jingu such that the engaging force of the engaging region is in a range of 0.3 N/25mm to 2.2 N/25mm with a reasonable expectation of success to ensure secure attachment of the diaper around the wearer.

With respect to **claim 5**: The article fairly suggested by Fries and Jingu will necessarily have a non engaging portion having an engaging force with said hook member that is not greater than 2.2 N/25mm, as the engaging force of the non-engaging portion will be less than that of the engaging portion, wherein the minimum engaging force for the engaging portion is 2.2 N/25mm. The motivation to modify the article of Fries so as to have an engaging portion and non-engaging portion is stated *supra* with respect to claim 1.

With respect to **claim 8**: The hook member of said fixing tape disclosed by Fries is a male

engaging piece of a hook-and-loop fastener. (Page 32, lines 13-15)

With respect to **claim 9**: The fixing tape 36 disclosed by Fries is directly attached to the surface of said side flap 56 or 58. Fries does not disclose that the fixing tape is folded along the outermost lateral edge of the respective side flap 56,58, though it is fully capable of being folded in this manner so that said hook member faces the inner surface of the side flap. One of ordinary skill in the art would be motivated to fold the fixing tape in this manner to keep it out of the way prior to use so that it does not prematurely engage an area of the diaper other than that intended, potentially causing tearing of the fixing tape in order to disengage it for proper use.

Fries does not disclose a surface of the flap having an engaging portion. Jingu discloses such an engaging portion. It would be obvious to one of ordinary skill in the art to fold the fixing tape of Fries such that it engages said surface of the article of Fries as modified by Jingu to temporarily protect the hook fastener from contamination which would reduce its engaging force with the engaging portion. Thus the fixing tape would be folded such that the hook member faces said surface of said side flap and is temporarily fixed to said surface of said side flap at the engaging portion, i.e. in the recited manner.

With respect to **claim 21**: Fries discloses a disposable diaper 10 comprising a diaper main body including a top sheet 28, a back sheet 30 and art absorbent body 32 disposed between said top sheet 28 and back sheet 30. (Page 4, lines 9-19) The diaper comprises a pair of side flaps 56,58 respectively extending outwardly from respective side edge portions in a lateral direction of said diaper main body, the side flaps are connected by bridge member 40 which is disposed between the top sheet and backsheet and thus the panels 56,58 are also disposed between said top sheet and back sheet. (Page 4, lines 19-27) Each of said side flaps 56,58 comprises an

elastic sheet sandwiched between upper and lower non-woven fabric layers. (Page 32, lines 1-7) A pair of fixing tapes in the form of fastener tabs 36 each having a hook member are attached to one of said side flaps 56,58 (Fig. 1) in a vicinity of an outermost lateral edge of said side flap. (Page 32, lines 18-21) The fixing tape 36 disclosed by Fries comprises (i) a fixing tape substrate defining the body of fastener 36, (ii) said hook member provided on a surface of said fixing tape substrate (Fig. 1), and (iii) a gripping portion at one of opposite ends of the fixing tape substrate and adjacent to the hook member (Fig. 1) in the form of a small tape that tapers at the distal end of the fastener with respect to the diaper body. The fixing tape 36 disclosed by Fries is directly attached to the surface of said side flap 56 or 58. Fries does not disclose that the fixing tape is folded along the outermost lateral edge of the respective side flap 56,58, though it is fully capable of being folded in this manner so that said hook member faces the inner surface of the side flap. One of ordinary skill in the art would be motivated to fold the fixing tape in this manner to keep it out of the way prior to use so that it does not prematurely engage an area of the diaper other than that intended, potentially causing tearing of the fixing tape in order to disengage it for proper use.

Fries does not disclose a surface of the flap having an engaging portion. Jingu discloses such an engaging portion. It would be obvious to one of ordinary skill in the art to fold the fixing tape of Fries such that it engages said surface of the article of Fries as modified by Jingu to temporarily protect the hook fastener from contamination which would reduce its engaging force with the engaging portion. Thus the fixing tape would be folded such that the hook member faces said surface of said side flap and is temporarily fixed to said surface of said side flap at the engaging portion, i.e. in the recited manner.

Fries does not disclose an engaging region on a surface of each side flap where the respective fixing tape is releasably engageable with said side flap through the hook member.

Jingu teaches an absorbent article having side flaps and fixing tapes having hook members wherein an engaging region is present on a surface of each side flap where the respective fixing tape is releasably engagable with said side flap through the hook member. The engaging region is defined by a non-woven fabric that has no adhesive on said surface. The engaging region comprises (a) an engaging portion in the form of loop fabric that is directly, mechanically and non-adhesively engagable with said hook member, and (b) a non-engaging portion defined by the surface of the side flap with which said hook member cannot be engaged at all and which comprises a nonwoven fabric necessarily thus having a lower engaging force with said hook member than the engaging portion and the non-engaging portion has an area that faces the hook member that is larger than the area of the engaging portion that faces the hook member. (Abstract, Figs. 3, 6 or 7) As can be seen in Fig. 3, and relying upon Fig. 3 of Jingu solely for its depiction of relative dimensions of the engaging regions 23 and the rest of wings 12 (i.e. the non-engaging portion shown as the more densely dotted area), an entire area of said engaging portion 23 is not within in a range of 5% to 50% of the entire area of said hook member. However, it would be obvious to one of ordinary skill in the art to further modify the article of Fries as modified by Jingu such that the entire area of said engaging portion is in the range of 5-50% of the entire area of said hook member with a reasonable expectation of success to ensure that the hook member sufficiently engages the engaging region. There is a design need or a market pressure to solve a problem (in this case provide a secure tape fastener that can engage the same respective part of a diaper it extends from), and there are a finite number of identified, predictable solutions (in this case the relative proportions of the hook area and engaging portion disclosed by Jingu), a person of ordinary skill in art has good reason to pursue known options within his or her technical grasp, and if this leads to anticipated success, it is likely product of ordinary skill and common sense, not innovation. The fixing tape substrate disclosed by Fries

comprises a nonwoven fabric, inasmuch as it is a tape fastener, having a lower engaging force with said hook member than the engaging portion disclosed by Jingu inasmuch as the engaging portion comprises loop fabric which is the complimentary fastener material to hook material and thus engages fully, as opposed to the fixing tape substrate which has no means for engaging the hook member at all. The engaging region disclosed by Jingu defines a temporary fixing portion at which said fixing tape is temporarily fixed to said surface of the side flap via said engaging portions in a manner that most of the direct engagement between the engaging portion and the hook member is achieved by a portion of the hook member that is immediately adjacent the gripping portion inasmuch as most of the area of the hook portion is adjacent the gripping portion.

The fixing tape 36 disclosed by Fries is directly attached to the surface of said side flap 56 or 58. Fries does not disclose that the fixing tape is folded, though it is fully capable of being folded along the outermost lateral edge of said side flap 56,58 so that said hook member faces the inner surface of the side flap. Fries does not disclose a surface of the flap having an engaging portion. Jingu discloses such an engaging portion. It would be obvious to one of ordinary skill in the art to fold the fixing tape of Fries such that it engages said surface of the article of Fries as modified by Jingu to temporarily protect the hook fastener from contamination which would reduce its engaging force with the engaging portion. Thus the fixing tape would be folded such that the hook member faces said surface of said side flap and is temporarily fixed to said surface of said side flap at the engaging portion, i.e. in the recited manner.

Fries does not disclose that said fixing tape is provided with an opening in said attaching portion. Tanzer teaches a fastener comprising a first flexible layer 72 comprised of a stretchable laminate of nonwoven material and a second flexible layer 78 attached to the first flexible layer. The first flexible layer contains islands of fastener material and the second flexible layer

contains openings 80 corresponding to the location and size of each island located in an area of said fastener that is considered herein to be an attaching region. Tanzer teaches that the openings allow for exposure of the fastener island 64, therefore it would be obvious to one of ordinary skill in the art to modify the tab fastener of the combined teaching of Fries and Jingu so as to contain openings in an attaching region as taught by Tanzer. ('069, Col. 9, line 67, Col. 10, lines 1,2, Col. 12, lines 57-65). The combined teaching of Fries and Jingu and Tanzer thus renders the limitation "a portion of said surface of said side flap being exposed through said opening and engageable with said hook member when said fixing tape is folded back" obvious.

With respect to **claim 23**: Neither Fries nor Jingu discloses an engaging force of said engaging region with said hook member. However, since the article of Fries as modified by Jingu has a hook member and an engaging portion that is the same material as that disclosed by applicant (i.e. loop material), it would be obvious to modify the article of Fries as modified by Jingu such that the engaging force of the engaging region is in a range of 0.3 N/25mm to 2.2 N/25mm with a reasonable expectation of success to ensure secure attachment of the diaper around the wearer.

With respect to **claim 24**: The article fairly suggested by Fries and Jingu will necessarily have a non engaging portion having an engaging force with said hook member that is not greater than 2.2 N/25mm, as the engaging force of the non-engaging portion will be less than that of the engaging portion, wherein the minimum engaging force for the engaging portion is 2.2 N/25mm.

With respect to **claim 25**: The hook member of said fixing tape disclosed by Fries is a male engaging piece of a hook-and-loop fastener. (Page 32, lines 13-15)

With respect to **claim 32**: Fries discloses a disposable diaper 10 comprising a diaper main body including a top sheet 28, a back sheet 30 and an absorbent body 32 disposed between said top sheet 28 and back sheet 30. (Page 4, lines 9-19) The diaper comprises a pair of side flaps 56,58 respectively extending outwardly from respective side edge portions in a lateral direction of said diaper main body. The side flaps are connected by bridge member 40 which is disposed between the top sheet and back sheet and thus the panels 56,58 are also disposed between said top sheet and back sheet. (Page 4, lines 19-27) Each of said side flaps 56,58 comprises an elastic sheet sandwiched between upper and lower non-woven fabric layers. (Page 32, lines 1-7) A pair of fixing tapes in the form of fastener tabs 36 each having a hook member are attached to one of said side flaps 56,58 (Fig. 1) in a vicinity of an outermost lateral edge of said side flap. (Page 32, lines 18-21) The fixing tape 36 disclosed by Fries comprises (i) a fixing tape substrate defining the body of fastener 36, (ii) said hook member provided on a surface of said fixing tape substrate (Fig. 1), and (iii) a gripping portion at one of opposite ends of the fixing tape substrate and adjacent to the hook member (Fig. 1) in the form of a small tape that tapers at the distal end of the fastener with respect to the diaper body. The fixing tape 36 disclosed by Fries is directly attached to the surface of said side flap 56 or 58. Fries does not disclose that the fixing tape is folded along the outermost lateral edge of the respective side flap 56,58, though it is fully capable of being folded in this manner so that said hook member faces the inner surface of the side flap. One of ordinary skill in the art would be motivated to fold the fixing tape in this manner to keep it out of the way prior to use so that it does not prematurely engage an area of the

diaper other than that intended, potentially causing tearing of the fixing tape in order to disengage it for proper use.

Fries does not disclose a surface of the flap having an engaging portion. Jingu discloses such an engaging portion. It would be obvious to one of ordinary skill in the art to fold the fixing tape of Fries such that it engages said surface of the article of Fries as modified by Jingu to temporarily protect the hook fastener from contamination which would reduce its engaging force with the engaging portion. Thus the fixing tape would be folded such that the hook member faces said surface of said side flap and is temporarily fixed to said surface of said side flap at the engaging portion, i.e. in the recited manner.

Fries does not disclose an engaging region on a surface of each side flap where the respective fixing tape is releasably engageable with said side flap through the hook member. Jingu teaches an absorbent article having side flaps and fixing tapes having hook members wherein an engaging region is present on a surface of each side flap where the respective fixing tape is releasably engagable with said side flap through the hook member. The engaging region is defined by a non-woven fabric that has no adhesive on said surface. The engaging region disclosed by Jingu comprises (a) an engaging portion in the form of loop fabric that is directly, mechanically and non-adhesively engagable with said hook member, and (b) a non-engaging portion defined by the surface of the side flap with which said hook member cannot be engaged at all. The non-engaging portion comprises a nonwoven fabric which is non-complimentary to the mechanically fastening hook member (i.e. it is not a loop and does not have loops thereon) and therefore necessarily has a lower engaging force with said hook member than the engaging portion. The non-engaging portion has an area that faces the hook member that is larger than the area of the engaging portion that faces the hook member. (Abstract, Figs. 3, 6 or 7) As can be seen in Fig. 3, and relying upon Fig. 3 solely for its depiction of relative dimensions of the

engaging regions 23 and the rest of wings 12 (i.e. the non-engaging portion shown as the more densely dotted area).

Jingu does not explicitly disclose that an entire area of said engaging portion 23 is within in a range of 5% to 50% of the entire area of said hook member. However, it would be obvious to one of ordinary skill in the art to further modify the article of Fries as modified by Jingu such that the entire area of said engaging portion is in the range of 5-50% of the entire area of said hook member with a reasonable expectation of success to ensure that the hook member sufficiently engages the engaging region. There is a design need or a market pressure to solve a problem (in this case provide a secure tape fastener that can engage the same respective part of a diaper it extends from), and there are a finite number of identified, predictable solutions (in this case the relative proportions of the hook area and engaging portion disclosed by Jingu), a person of ordinary skill in art has good reason to pursue known options within his or her technical grasp, and if this leads to anticipated success, it is likely product of ordinary skill and common sense, not innovation. The fixing tape substrate disclosed by Fries comprises a nonwoven fabric, inasmuch as it is a tape fastener, having a lower engaging force with said hook member than the engaging portion disclosed by Jingu inasmuch as the engaging portion comprises loop fabric which is the complimentary fastener material to hook material and thus engages fully, as opposed to the fixing tape substrate which has no means for engaging the hook member at all. The engaging region disclosed by Jingu defines a temporary fixing portion at which said fixing tape is temporarily fixed to said surface of the side flap via said engaging portions in a manner that most of the direct engagement between the engaging portion and the hook member is achieved by a portion of the hook member that is immediately adjacent the gripping portion inasmuch as most of the area of the hook portion is adjacent the gripping portion.

Fries does not disclose that said fixing tape is provided with an opening in said attaching portion. Tanzer teaches a fastener comprising a first flexible layer 72 comprised of a stretchable laminate of nonwoven material and a second flexible layer 78 attached to the first flexible layer. The first flexible layer contains islands of fastener material and the second flexible layer contains openings 80 corresponding to the location and size of each island located in an area of said fastener that is considered herein to be an attaching region. Tanzer teaches that the openings allow for exposure of the fastener island 64, therefore it would be obvious to one of ordinary skill in the art to modify the tab fastener of the combined teaching of Fries and Jingu so as to contain openings in an attaching region as taught by Tanzer. ('069, Col. 9, line 67, Col. 10, lines 1,2, Col. 12, lines 57-65). The combined teaching of Fries and Jingu and Tanzer thus renders the limitation "a portion of said surface of said side flap being exposed through said opening and engageable with said hook member when said fixing tape is folded back" obvious.

With respect to **claim 33**: Neither Fries nor Jingu discloses an engaging force of said engaging region with said hook member. However, since the article of Fries as modified by Jingu has a hook member and an engaging portion that is the same material as that disclosed by applicant (i.e. loop material), it would be obvious to modify the article of Fries as modified by Jingu such that the engaging force of the engaging region is in a range of 0.3 N/25mm to 2.2 N/25mm with a reasonable expectation of success to ensure secure attachment of the diaper around the wearer.

With respect to **claim 34**: The article fairly suggested by Fries and Jingu will necessarily have a non engaging portion having an engaging force with said hook member that is not greater than

2.2 N/25mm, as the engaging force of the non-engaging portion will be less than that of the engaging portion, wherein the minimum engaging force for the engaging portion is 2.2 N/25mm. The motivation to modify the article of Fries so as to have an engaging portion and non-engaging portion is stated *supra* with respect to claim 1.

With respect to **claim 35**: Tanzer teaches a fastener comprising a first flexible layer 72 comprised of a stretchable laminate of nonwoven material and a second flexible layer 78 attached to the first flexible layer. The first flexible layer contains islands of fastener material and the second flexible layer contains openings 80 corresponding to the location and size of each island located in an area of said fastener that is considered herein to be an attaching region and defines a third portion as claimed. The motivation to further modify the article of Fries as modified by Jingu is stated *supra* with respect to claim 32.

With respect to **claim 36**: The combined teaching of Fries and Jingu and Tanzer renders the limitation of "a portion of said surface of said side flap being exposed through said opening and directly mechanically and non-adhesively engageable with said hook member, including an innermost portion adjacent the gripping portion, when said fixing tape is folded back" obvious for reasons stated *supra* with respect to claim 32.

With respect to **claim 37**: The combined teaching of Fries and Jingu and Tanzer renders the limitation of "a portion of said surface of said side flap being exposed through said opening and directly mechanically and non-adhesively engageable with said hook member when said fixing tape is folded back" obvious for reasons stated *supra* with respect to claim 32.

With respect to **claim 38**: In light of the rejection of claim 38 under 35 U.S.C. 112, the claim is given its broadest reasonable interpretation. An entire area of the second, nonengaging portion disclosed by Fries as modified by Jingu is greater than that of the third portion, i.e. the portion of the fixing tape outside the openings, inasmuch as the nonengaging portion area as a whole is greater than the first engaging portion area, wherein the third portion area is a subsection of the first engaging portion having a smaller area than both the first and second portions. The motivation to further modify the article of Fries as modified by Jingu is stated *supra* with respect to claim 32.

With respect to **claim 39**: In light of the rejection of claim 38 under 35 U.S.C. 112 and the lack of clear and explicit disclosure regarding the boundaries of the recited third portion, the claim is given its broadest reasonable interpretation. Tanzer discloses that the opening diameter 71 of an opening 64 is 10-28 mm. ('069, Col. 15, lines 1,2) Examiner is interpreting the third portion of the tape of Tanzer as being the area collectively defined by the areas directly outside the perimeter of each opening 64 that each define an annulus with thickness of, e.g., 1 mm. The ratio of area of the third portion to hook member area, i.e. the opening area, is $4/D$ where D is the diameter of the opening, yielding a ratio of third portion area to hook member area of between $4/28$ and $4/10$, or 14-40%, which overlaps the claimed range of a third portion having an entire area that is 5-50% of the hook member. The motivation to further modify the article of Fries as modified by Jingu is stated *supra* with respect to claim 32.

With respect to **claim 40**: As can be seen most clearly in Fig. 5 of Tanzer, the first portion, i.e. the area occupied by the openings is located in the lateral direction, between said third portion,

the portion outside the outer openings in the lateral direction and the outermost lateral edge of the respective side flap. The motivation to further modify the article of Fries as modified by Jingu so as to have a fixing tape provided with an opening as disclosed by Tanzer is stated *supra* with respect to claim 32.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELANIE J. HAND whose telephone number is (571)272-6464. The examiner can normally be reached on Mon-Thurs 8:00-5:30, alternate Fridays 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Melanie J Hand/
Examiner, Art Unit 3761